FILTERING OF MIN.BIAS DATA FOR PRODUCTION

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- Why do we need filtering ?
- ooHit Filter (criteria)
- Results

WHAT WE WANT TO FILTER (OUT)

- **Abnormal energy deposits ("ILOSS" problem)**
  - single ECAL crystal
  - single HCAL readout
- **Too high-p_T min.bias events (?)**
  - far out of exponential tail
- **Something else (?)**

FILTERING CRITERIA

- **Variables :** — **Max. value**
  - ratio_e = max. Ecal hit E_T / $\hat{p}_T$ — 1.0
  - ratio_h = max. Hcal scaled* hit E_T / $\hat{p}_T$ — 1.0
  - ratio_g = vector E_T sum / scalar E_T sum — 0.95

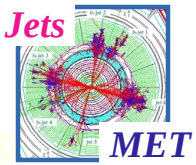
- **Event is filtered (rejected), at least in log file, if :**
  - one of the variables overstep corresponding max.value

    .AND.
  - max. Ecal or (scaled) Hcal hit > coresponding limit,

    10 or 15 GeV respectively

    (as for $\hat{p}_T$ ~ 0 max. Ecal and Hcal hist can be sizeable)

* scaled : multiplied by corresponding sampling factor



Code (.h, .cc, BuildFile) : http://cmsdoc.cern.ch/cms/production/www/cgi/data/Filters/Calo02_Id_1/

Rejected Events

Run # : Ev. #	Reason
19 : 474	$\hat{p}_T$ = 14.0 GeV, max. Hcal hit E_T = 17.3 GeV
40 : 389	bad Position() in EE ("unknown" exception)
61 : 164-185	absent Ecal hits (!) - the entire run #61 excluded
70 : 440	$\hat{p}_T$ = 110 GeV
77 : 166	$\hat{p}_T$ = 104 GeV
139 : 241	$\hat{p}_T$ = 160 GeV
202 : 428	$\hat{p}_T$ = 112 GeV
220 : 20	$\hat{p}_T$ = 137 GeV
227 : 130	$\hat{p}_T$ = 3.2 GeV, max. Hcal hit E_T = 15.5 GeV
255 : 174	$\hat{p}_T$ = 117 GeV
314 : 42	$\hat{p}_T$ = 10.9 GeV, max. Hcal hit E_T = 19.7 GeV